REMARKS

I. General

Claims 1-24 were pending in the present application, and all of such pending claims were rejected in the present Office Action (mailed September 8, 2004). The outstanding issues in the current Office Action are:

- Claims 1-24 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite;

- Claims 1 and 3 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,115,719 issued to Purdy et al. (hereinafter "*Purdy*");

- Claims 10, 12, 15, and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,687,733 issued to Manukyan (hereinafter "*Manukyan*");

- Claims 20 and 24 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,449,643 issued to Hyndman et al. (hereinafter "*Hyndman*");

- Claims 2 and 7-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of *Hyndman*;

- Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of U.S. Patent No. 5,930,154 issued to Thalhammer-Reyero (hereinafter "*Thalhammer-Reyero*");

- Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of *Manukyan*;

- Claims 11 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of U.S. Patent No. 6,009,274 issued to Fletcher et al. (hereinafter "*Fletcher*");

- Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of *Thalhammer-Reyero*;

- Claims 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of *Hyndman*;

- Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hyndman* in view of *Thalhammer-Reyero*; and

- Claims 22-23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hyndman* in view of *Manukyan*.

In response, Applicant respectfully traverses the outstanding claim rejections, and requests reconsideration and withdrawal thereof in light of the amendments and remarks presented herein.

II. Amendments

Claims 1 and 10 are amended and new claim 25 is added. No new matter is added by these amendments and newly added claim.

Claim 1 is amended to recite "implementing at least one compartment for ~~containing~~ containment of at least one process executable on said processor-based system" (deleted language shown in strikethrough and added language shown underlined). Thus, this clarifies that the compartment is implemented for containment of at least one process. Claim 1 is further amended herein to clarify that the recited "providing" is "by said processor-based system". Support for these amendments to claim 1 can be found, inter alia, at page 11, lines 1-24.

Claim 10 is amended to delete the element "at least one processor", which is intended as a broadening, rather than a narrowing, amendment.

New claim 25 is added, which depends from claim 1 and recites that the implementing at least one compartment comprises "utilizing a kernel for enforcing said at least one compartment". Support for this new claim can be found, *inter alia*, at page 7, lines 12-18, and the discussion of FIGURES 4 and 5 of the present application.

III. Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-24 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

The Office Action asserts that the language "providing at least one operating system command-line utility executable to manipulate" is indefinite because it is not made clear who or what is providing the command-line utility. Claim 1 is amended herein to clarify that this "providing" is "by said processor-based system". Thus, this element of claim 1 is believed to be sufficiently definite under 35 U.S.C. § 112, second paragraph.

The Office Action further asserts that "containing" in claim 1 is indefinite because it is not made clear if this term applies to containment or not. Claim 1 is amended herein to delete the term "containing" and instead recite "implementing at least one compartment for containment of at least one process executable on said processor-based system", which Applicant respectfully submits clarifies claim 1 in this regard. Accordingly, this element of claim 1 is believed to be sufficiently definite under 35 U.S.C. § 112, second paragraph, particularly in view of the specification's discussion of the containment security mechanism, *see e.g.*, page 11, lines 1-24 of the present application.

The Office Action further asserts that the term "compartment" in claim 1 is indefinite because it is not made clear in the claim language whether this is a hardware compartment or a software compartment. Applicant respectfully submits that further clarification of this term is not required for claim 1 to comply with the requirements of 35 U.S.C. § 112, second paragraph. First, the present application explains at page 11, lines 1-17:

> As described above, containment is an effective security mechanism to implement within a system. As described in greater detail hereafter, containment functionality may be implemented within a system by utilizing *compartments* within the system. In general, compartments refer to groups of processes or threads which are limited to accessing certain subsets of system resources of a computer system. Thus, compartments are semi-isolated portions of a system. For example, an operating system for supporting a plurality of processes (e.g., applications) may be implemented on a system,

> wherein at least some of the processes are provided with a label or tag, each label or tag being indicative of a logically protected computing environment or "compartment." Each process having the same label or tag may belong to the same compartment. In certain implementations, containment functionality can be provided by mandatory protection of processes, files and network resources, with the principal concept being based on the compartment. Services and processes (e.g., applications) on the system may be run within separate compartments. Processes within each compartment may only have direct access to the resources in that compartment. Access to other resources, whether local or remote, may be allowed only via well-controlled communication interfaces. Exemplary implementations of compartments within a system are described in further detail hereafter.

Thus, Applicant submits that the term "compartment" as used in claim 1 is sufficiently clear in accordance with 35 U.S.C. § 112, second paragraph, particularly in view of the specification of the present application. Further, any remaining question regarding whether the recited compartment is a hardware compartment or a software compartment goes to breadth of this term. Applicant reminds the Examiner that breadth is not indefiniteness, *see* M.P.E.P. § 2173.04.

In view of the above, Applicant respectfully requests withdrawal of the outstanding rejections of claim 1 under 35 U.S.C. § 112, second paragraph.

Claim 10

As with claim 1, the Office Action asserts that the term "compartment" of claim 10 is indefinite. The Office Action asserts that "it is not made explicitly clear in the claim language whether this is a hardware compartment or a software compartment". Page 2 of the Office Action. However, claim 10 recites "an operating system implementing at least one compartment to which at least one process executable on said system can be associated" (emphasis added). Applicant respectfully submits that claim 10 clearly recites that an operating system implements the "compartment", and thus the compartment is sufficiently clear under 35 U.S.C. § 112, second paragraph.

The Office Action further asserts that "at least one configuration file defining at least one compartment" of claim 10 is indefinite. The Office Action asserts that this language is indefinite "because it is not made explicitly clear in the claim language where this is from." Page 3 of the Office Action. The Office Action goes on to explain that "it is unclear if it is

located in the compartment or outside the compartment". *Id.* Applicant respectfully submits that this language is sufficiently clear in that it recites that the claimed "system" comprises the recited "at least one configuration file". Clarifying specifically where the configuration file is located within the system (e.g., whether it is located in the compartment or outside the compartment) is unnecessary for definiteness under 35 U.S.C. § 112, second paragraph. Rather, any question regarding whether the configuration file is located in the compartment or outside the compartment goes to breadth of the claim (e.g., this language of the claim encompasses either case). Applicant again reminds the Examiner that breadth is not indefiniteness, *see* M.P.E.P. § 2173.04.

The Office Action further asserts that "it is not made explicitly clear whether there is one configuration for one compartment, or if a configuration file can be defined for multiple compartments". Page 3 of the Office Action. Applicant respectfully submits that the language clearly recites "at least one configuration file defining at least one compartment". Thus, this language encompasses any situation in which at least one configuration file defines at least one compartment. For instance, it encompasses situations in which multiple configuration files are provided (which may each define at least one compartment). Thus, in some instances multiple configuration files may define a given compartment. Further, this language encompasses situations in which a configuration file defines multiple compartments (as the language recites "at least one compartment"). While this language encompasses many different situations, the breadth of this language does not render it indefinite, *see* M.P.E.P. § 2173.04.

The Office Action further asserts that the language "means for performing management" is indefinite. The Office Action asserts that this language is indefinite "because it is not made explicitly clear in the claim language who or what is performing the management". Page 3 of the Office Action. This language is recited in means-plus-function format, which is permitted under 35 U.S.C. § 112. Applicant respectfully reminds the Examiner that the sixth paragraph of 35 U.S.C. § 112 expressly provides that an "element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the

specification and equivalents thereof." Applicant respectfully submits that no further language is needed for this element to be proper under 35 U.S.C. § 112, second paragraph.

Also, claim 10 is rejected as being incomplete for omitting essential structural cooperative relationships of elements. "The omitted structural cooperative relationships are: a) 'at least one processor' to 'at least one compartment' and b) 'at least one processor' to 'management'." Pages 3-4 of the Office Action. Claim 10 is amended herein to delete the language "at least one processor", which thus renders the above issue moot.

In view of the above, Applicant respectfully requests withdrawal of the outstanding rejections of claim 10 under 35 U.S.C. § 112, second paragraph.

Claim 20

As with claim 1, the Office Action asserts that the term "compartment" of claim 20 is indefinite. The Office Action asserts that "it is not made explicitly clear in the claim language whether this is a hardware compartment or a software compartment". Page 2 of the Office Action. However, claim 20 recites "at least one compartment implemented by an operating system" (emphasis added). Applicant respectfully submits that claim 20 clearly recites that an operating system implements the "compartment", and thus the compartment is sufficiently clear under 35 U.S.C. § 112, second paragraph.

The Office Action further asserts that "managing at least one compartment" in claim 20 is indefinite because "it is not made explicitly clear who or what is doing the managing". Page 3 of the Office Action. Claim 20 recites "library of software functions for managing at least one compartment implemented by an operating system". Who or what may use the library of software functions for performing the managing is irrelevant to the claim. Claim 20 is sufficiently definite under 35 U.S.C. § 112, second paragraph, in that it recites a library of software functions for managing at least one compartment implemented by an operating system. That is, because it is the library of software functions that is being claimed, the entity (e.g., process or user) that may use such library of software functions does not need to be specified in order for the library of software functions to be clearly defined by the claim.

The Office Action further asserts that the terms "at least one process can be associated with said at least one compartment and said at least one compartment defines accessibility of

resources for said at least one process" and "at least one command-line utility executable to manipulate said at least one compartment" are indefinite. First, the Office Action asserts that these terms are indefinite "because it is not made explicitly clear in the claim language whether there is one process associated with one compartment (or more)". Page 3 of the Office Action. Applicant respectfully submits that the language clearly recites "at least one process can be associated with said at least one compartment". Thus, this language encompasses any situation in which at least one process is associated with at least one compartment. While this language encompasses many different situations (e.g., multiple processes associated with one compartment, a process associated with multiple compartments, etc.), the breadth of this language does not render it indefinite, *see* M.P.E.P. § 2173.04.

Further, the Office Action asserts that the above terms of claim 20 are indefinite because "it is not made explicitly clear who is doing the manipulating of the compartment". Page 3 of the Office Action. Claim 20 recites "said library of software functions includes at least one command-line utility executable to manipulate said at least one compartment". Who or what may use the library of software functions (e.g., command-line utility) for performing the manipulating is irrelevant to the claim. Claim 20 is sufficiently definite under 35 U.S.C. § 112, second paragraph, in that it recites a library of software functions that includes at least one command-line utility executable to manipulate the at least one compartment. That is, because it is the library of software functions that is being claimed, the entity (e.g., process or user) that may use the command-line utility does not need to be specified in order for the library of software functions to be clearly defined by the claim.

In view of the above, Applicant respectfully requests withdrawal of the outstanding rejections of claim 20 under 35 U.S.C. § 112, second paragraph.

IV. Rejections under 35 U.S.C. § 102(e)

Claims 1 and 3 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Purdy*. Claims 10, 12, 15, and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Manukyan*. Claims 20 and 24 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Hyndman*. Each of these rejections is addressed below.

Independent Claim 1

Claim 1 recites "providing, by said processor-based system, at least one operating system command-line utility executable to manipulate said at least one compartment." *Purdy* does not teach an operating system command-line utility executable to manipulate a compartment, as recited by claim 1. In rejecting claim 1, the present Office Action asserts (at page 4 thereof) that "Purdy teaches manipulating the compartment and it is inherent that there is an operating system command-line utility (computer instructions or scripts) for the manipulating because without them, the manipulating could not occur." Applicant respectfully disagrees. In order to properly establish that an element is inherently included within the applied reference, "the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art," M.P.E.P. § 2112, citing *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis original).

It is not necessary that an operating system command-line utility be provided for manipulating a compartment. For instance, as described in connection with Fig. 9 of the present application, a system administrator was traditionally required to edit a configuration file in which compartments are defined in order to manipulate the compartments. Thus, the user edited a configuration file, rather than utilizing an operating system command-line utility, for manipulating compartments. In the system of *Purdy*, it does not necessarily flow that an operating system command-line utility is provided, but rather a user may edit a file or interact with a database, as examples, for manipulating the "compartments" of *Purdy*.

Accordingly, *Purdy* fails to teach all elements of claim 1, and thus claim 1 is not anticipated by *Purdy* under 35 U.S.C. § 102.

Independent Claim 10

In accordance with 37 C.F.R. § 1.131, Applicant submits an affidavit herewith that establishes invention of the subject matter of claim 10 prior to the effective date of *Manukyan* (i.e., prior to June 1, 2001). Accordingly, withdrawal of this rejection of claim 10 is respectfully requested.

Independent Claim 20

To anticipate a claim under 35 U.S.C. § 102, a single reference must teach every element of the claim, *see* M.P.E.P. § 2131. As discussed further below, Applicant respectfully submits that *Hyndman* fails to teach each and every element of independent claim 20.

Independent claim 20 recites:

> library of software functions for managing at least one compartment implemented by an operating system, wherein at least one process can be associated with said at least one compartment and said at least one compartment defines accessibility of resources for said at least one process associated therewith; and
>
> said library of software functions includes at least one command-line utility executable to manipulate said at least one compartment.

Hyndman does not teach a library of software functions for managing "at least one compartment implemented by an operating system". Page 6 of the present Office Action appears to contend that either the building blocks (BB) or "components" of *Hyndman* are a compartment implemented by an operating system. *Hyndman* teaches that:

> A component or an object is an encapsulated part of a software system with a well defined interface. Components serve as the building blocks of a systems, or the elements of a software part list, and can be either generic or application specific. Generic components serve as a system skeleton, enabling code reuse and faster development of new capabilities. (Col. 1, lines 34-40).

Hyndman fails to teach that such a component is implemented by an operating system to define accessibility of resources for at least one process associated therewith.

Further, *Hyndman* does not teach at least one command-line utility executable to manipulate the at least one compartment. *Hyndman* teaches "an access control user interface connected to the access control library for viewing and editing the access control data on the GUI" (col. 3, lines 13-15). While *Hyndman* teaches such a user interface to a database, it fails to teach a command-line utility executable to manipulate the at least one compartment, as recited by claim 20. Again, *Hyndman* does not teach a compartment implemented by an operating system. Thus, *Hyndman* does not provide a command-line utility for interfacing to

the system's operating system in order to manipulate a compartment implemented by such operating system.

In view of the above, claim 20 is not anticipated by *Hyndman* because *Hyndman* fails to teach all elements of claim 20.

Dependent Claims

Claims 12, 15, 19, and 24 each depend either directly or indirectly from one of independent claims 10 and 20, and thus inherit all limitations of the respective independent claim from which they depend. It is respectfully submitted that dependent claims 12, 15, 19, and 24 are allowable not only because of their dependency from their respective independent claims for the reasons discussed above, but also in view of their novel claim features (which both narrow the scope of the particular claims and compel a broader interpretation of the respective base claim from which they depend).

V. Rejections under 35 U.S.C. § 103(a)

Claims 2 and 7-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of *Hyndman*. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of *Thalhammer-Reyero*. Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Purdy* in view of *Manukyan*. Claims 11 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of *Fletcher*. Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of *Thalhammer-Reyero*. Claims 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Manukyan* in view of *Hyndman*. Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hyndman* in view of *Thalhammer-Reyero*, and claims 22-23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hyndman* in view of *Manukyan*. Applicant addresses these rejections below.

Claims 2-9, 11-14, 16-18, and 21-23 each depend either directly or indirectly from one of independent claims 1, 10, and 20, and thus inherit all limitations of the respective independent claim from which they depend. It is respectfully submitted that dependent claims 2-9, 11-14, 16-18, and 21-23 are allowable not only because of their dependency from their respective independent claims for the reasons discussed above, but also in view of their

novel claim features (which both narrow the scope of the particular claims and compel a broader interpretation of the respective base claim from which they depend).

VI. New Claim 25

New claim 25 depends from independent claim 1 and is believed to be allowable not only because of its dependency from independent claim 1 for the reasons discussed above, but also in view of its further novel claim features (which both narrows its specific scope and compels a broader interpretation of independent claim 1 from which it depends).

VII. Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-2025, under Order No. 10013499-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Label No. EV 482745154US in an envelope addressed to: M/S Amendment, Commissioner for Patents, Alexandria, VA 22313.

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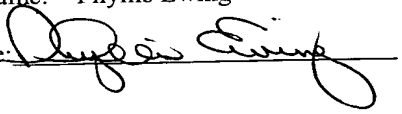
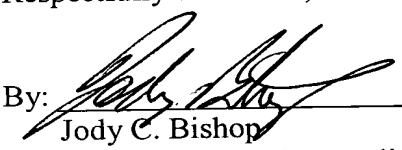
Signature: 

Respectfully submitted,

By: 

Jody C. Bishop
Attorney/Agent for Applicant(s)
Reg. No. 44,034
Date: January 10, 2005
Telephone No. (214) 855-8007